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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,881	01/18/2002	Albert E. Johnson	4500-7 (04500.0012.6)	7900
26158 7590 04/18/2007 WOMBLE CARLYLE SANDRIDGE & RICE, PLLC ATTN: PATENT DOCKETING 32ND FLOOR P.O. BOX 7037 ATLANTA, GA 30357-0037			EXAMINER CHRISS, JENNIFER A	
			ART UNIT 1771	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/18/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/051,881

Applicant(s)

JOHNSON ET AL.

Examiner

Jennifer A. Chriss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,6,7,9,11-13 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,6-7,9,11-13,27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 25, 2007 has been entered. The Applicant's Amendments and Accompanying Remarks, filed January 25, 2007 have been entered and have been carefully considered. Claims 6 – 7, 9 and 11 – 12 are amended, claims 1 – 2, 4 – 5, 8, 10 and 14 – 26 are cancelled, claim 27 is added and claims 3, 6 – 7, 9, 11 – 13 and 27 are pending. In view of Applicant's amendments and newly submitted independent claim 27, the Examiner has withdrawn all previously set forth rejections as detailed in paragraphs 3 – 5 of the Office Action dated August 7, 2006. The invention as currently claimed is not found to be patentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 3 is objected to because of the following informalities: the claim lists polyester twice. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. Claims 3, 6 - 7, 11 - 13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corry (US 2,942,327) in view of Schnabel (GB 1,374,223).

Corry is directed to a coated fabric (Title) suitable for convertible automobile tops (column 3, lines 15 - 25).

Corry teaches a composite comprising a particular fabric, or "outer fabric layer", in a particular spatial relationship with a second fabric, or "inner fabric layer", which can be the same or different, and a flexible sheet material, or "adhesive waterproofing layer", disposed between the two fabrics and adhered to adjacent surfaces of each (column 3, lines 45 - 55). See Figures 4 and 5. The fabrics can comprise filament yarns of polyester, polyamide, or the like (column 3, lines 1 - 5). The film or flexible sheet material can comprise polyvinyl chloride (column 2, lines 45 - 55), which is known in the art to be waterproof. Corry teaches that the warp or weft yarn can comprise 100 denier nylon (column 4, lines 25 - 60) meeting the denier of the core yarn set forth by claim 5. It should be noted that both the first and second fabric layers comprise non-coated yarns.

Corry teaches the claimed invention above but fails to that the "outer woven fabric layer" is formed of at least 50% by weight polymeric coated specialty yarns and other effect yarns as required by claim 27. Corry fails to teach that the core yarn of the specialty yarns is selected from the group consisting of polyester, nylon, acrylic,

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fiberglass, aramids, olefins and carbon fibers as required by claim 3. Corry fails to teach that the polymeric coating is selected from the group consisting of polyvinyl chloride, nylon, olefins, thermoplastic olefin elastomers, urethane, EVA, polyester, ionomer, polyphenylene sulfide, polyethersulfone, fluoropolymer, polyethertone and liquid crystal polymers as required by claim 6. Corry fails to teach that the coating is polyvinyl chloride and the core yarn is polyester as required by claim 7. Corry fails to teach that the coated yarn is introduced into the warp alone as required by claim 11. Corry fails to teach that the coated yarn is introduced into the fill alone as required by claim 12. Corry fails to teach that the coated yarn is introduced into both the warp and the fill in a pattern alternating with effect yarns as required by claim 13.

Schnabel is directed to a method of making flexible textured thermoplastic sheets (Title) suitable for applications such as roof coverings (page 4, lines 40 – 45). Schnabel teaches a flexible sheet comprising a woven fabric comprising at least one thermoplastic filament (page 2, lines 40 – 60). Schnabel teaches that the filaments are individually coated with a synthetic material before being incorporated into the fabric (page 2, lines 55 – 65). Schnabel teaches the use of polyvinyl chloride as the coating material (page 3, lines 40 – 55) and according to claim 13, the thermoplastics material (of the core yarn) can comprise polypropylene or polyamide. The coated filaments may be combined with other filaments in either the warp or weft or both directions (page 2, lines 65 – 125). Schnabel teaches that the filaments can be introduced in varying patterns depending on the end use such as twill, herring-bone, sculptured and fancy

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weaves (page 2, lines 60 – 85). The Examiner equates the other filaments having a reduced degree of hardness (page 2, lines 85 – 110) to Applicant's "effect yarns". It should be noted that Schnabel only discusses the use of the coated yarns and other yarns thus the requirement of "at least 50% by weight of polymeric coated and other effect yarns".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use at least 50% by weight of polyvinyl chloride coated thermoplastic yarn combined with other yarns as suggested by Schnabel by the desire to create a decorative outer material having strength, stability and flexibility provided by the combination of coated yarns and other yarns having different material properties and/or color (page 2, lines 85 – 110).

It would have been obvious to incorporate the other filaments into the woven fabric of Corry into the fill alone, into the warp alone or into both the warp and fill as suggested by Schnabel motivated by the desire to customize the composite fabric based on the end use.

As to claims 3 and 7, Schnabel teaches that any natural or synthetic fiber can be used as the core yarn (page 2, lines 50 – 55) but fails to specifically teach the use of polyester. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use polyester as the core yarn based on its suitability for the intended use and wide availability based design choice.

As to claim 27, Corry in view of Schnabel fails to teach that the denier of the core yarn is 70 – 1200 and the denier of the specialty yarn is 500 - 3500. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the denier of the core yarn and specialty yarn since it has been held that, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The burden is upon the Applicant to demonstrate that the claimed denier is critical and has unexpected results. In the present invention, one would have been motivated to optimize the denier of the core yarn to 70 – 1200 and the denier of the specialty yarn to 500 – 3500 motivated by the desire to create a strong and flexible fabric.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corry (US 2,942,327) in view of Schnabel (GB 1,374,223) as applied above, further in view of Druckman et al. (US 4,996,100).

Corry in view of Schnabel fails to teach that the effect yarns are selected from the group consisting of acrylics, modacrylics, polypropylene, polyethylene and polyester as required by claim 9.

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Druckman is directed to improved fabrics suitable for use outside exposed to environmental elements (column 1, lines 1 – 8). Druckman teaches the alternating of vinyl and soft fabrics yarns in the warp direction and filling direction of a woven fabric (Abstract). Druckman notes that the resulting fabric has the durability characteristics of the vinyl while possessing soft characteristics provided by the soft fabric yarns (Abstract). Druckman teaches that suitable soft fibers may be modacrylics, acrylics, polypropylene, polyethylene and polyesters (column 2, lines 35 – 37). By examining Figure 2, it is shown that the majority of the yarns in the woven fabric are vinyl yarns rather than the soft yarns.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the effect yarns of Druckman in an alternating fashion as suggested by Druckman in the composite of Corry in view of Schnabel motivated the desire to create a fabric with high durability provided by the vinyl yarns and soft characteristics provided by the effect yarns in addition to creating an aesthetically pleasing fabric.

Response to Arguments

6. Applicant's arguments with respect to claims 3, 6 – 7, 9, 11 – 13 and 27 have been considered but are moot in view of the new ground(s) of rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Chriss whose telephone number is 571-272-7783. The examiner can normally be reached on Monday - Friday 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571 - 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jennifer Chriss
April 10, 2007



Ms. Arti R. Singh
Primary Examiner
Tech Center 1700